

**PATENT COOPERATION TREATY
PCT**

REC'D 04 MAY 2006

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 030482PC	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/AU2004/001821	International filing date (day/month/year) 23 December 2004	Priority date (day/month/year) 8 January 2004	
International Patent Classification (IPC) or national classification and IPC F01N 3/038 (2006.01), F01N 3/10 (2006.01), B01D 53/94 (2006.01), F01N 3/20 (2006.01) ACTION DATE: 21 APRIL 2006			
Applicant SAVE THE WORLD AIR, INC et al			

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ (sent to the applicant and to the International Bureau) a total of two sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 21 June 2005	Date of completion of this report
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer D.R. LUM Telephone No. (02) 6283 2544

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001821

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ The international application in the language in which it was filed
- ☐ A translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
pages 1-12 as originally filed/furnished
pages* received by this Authority on _____ with the letter of _____
pages* received by this Authority on _____ with the letter of _____
- ☒ the claims:
pages as originally filed/furnished
pages* as amended (together with any statement) under Article 19
pages* 13-14, received by this Authority on 21 June 2005 with the letter of 21 June 2005
pages* received by this Authority on _____ with the letter of _____
- ☒ the drawings:
pages 1/3 - 3/3 as originally filed/furnished
pages* received by this Authority on _____ with the letter of _____
pages* received by this Authority on _____ with the letter of _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
- ☐ restricted the claims
 - ☐ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☐ neither restricted the claims nor paid additional fees
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:

The International Preliminary Report on Patentability (Chapter II) has been drawn up in respect of the entire international application but the International Preliminary Examining Authority is of the opinion that the application does not appear to comply with the requirements of unity of invention as set forth in the PCT regulations (Article 34(3), Rule 68(1) PCT).

The separate groups of invention are:

1. Claims 1-10 are directed to a device to improve the working of an inline catalytic converter. It is considered that the device comprises a particular internal profile comprising at least a pair of recesses or cavities to facilitate increased turbulence of the gasses to improve heat absorption comprises a first "special technical feature".
2. Claims 11-16 are directed to a device to improve the working of an inline catalytic converter. It is considered that device comprising a valve which is operable between an open and a closed or partially closed position and located downstream from the catalytic converter to increase the resident time of the exhaust gas around the catalytic converter comprises a second "special technical feature".

These groups are not so linked as to form a single general inventive concept, that is, they do not have any common inventive features, which define a contribution over the prior art. However this concept is not novel in the light of all the documents cited in the International Search Report. Therefore these claims lack unity a priori.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001821

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-10	YES
	Claims 11-16	NO
Inventive step (IS)	Claims 1-10	YES
	Claims 11-16	NO
Industrial applicability (IA)	Claims 1-16	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

- D1 JP 9-79032 A (CALSONIC CORP)
- D2 GB 2334305 A (FORD GLOBAL TECHNOLOGIES, INC.)
- D3 WO 2002/068807 A1 (MITSUBISHI JIDOSHA KOGYO KABUSHIKI KAISHA)
- D4 US 4727796 A (DERKACH)
- D5 US 5355673 A (STERLING et al)

Novelty (N) and Inventive Step- Claims 11-16

The invention as defined by claims 11-16 is not novel in light of the disclosure in D1 – D5, for example, D2 provides a pressure regulating valve which is deflected by the mass flow of exhaust gases and consequently will raise the temperature of the exhaust gases and ultimately the catalytic converter, re page 4 line 11- page 5 line 2.

Also, D4 discloses a flap valve located at the end of the tail pipe and will created an increase in pressure due to its weight, hence prolonging the flow of the gases thus improving the transfer of heat to its surrounds, and is opened by the exhaust gases.

As all the features are disclosed, the invention as claimed lacks novelty and hence an inventive step.

Attention is also drawn to Box VI regarding the novelty & Inventive step aspects of claims 1-3.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
P,X US 6737027 B1	18 May 2004	9 September 1999	9 September 1999

Novelty & Inventive Step Claims 1-3

US 6737027 discloses a converter with end rings 30 including discs with apertures (figures 2 and 3) and also column 2 lines 50-60; note that the spaces 64 between the rings 30 and the catalytic substances 20 have been construed to equate to the pair of recesses or cavities of the claimed invention.

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure

Date of non-written disclosure
(day/month/year)Date of written disclosure
referring to non-written disclosure
(day/month/year)